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Appl. No. 10/537,897
Atty. Ref.: 4982-5
Amendment After Final Rejection
May 22, 2009

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method for increasing plant yield under conditions promoting plant growth relative to a corresponding wild type plant under said conditions, comprising increasing expression in a plant of a nucleic acid sequence encoding a 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger protein comprising the following motifs (i) – (iv):

(i) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 5 or SEQ ID NO:51, wherein the Leu at position 3 may be any hydrophobic amino acid (SEQ ID NO:51);

(ii) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 7 wherein Xaa at positions 1 and 5 is any hydrophobic residue and Xaa at position 6 is optionally present and, when present, is any amino acid (SEQ ID NO:7);

(iii) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 8 wherein the Ser at position 3 is optionally present (SEQ ID NO:8); and

(iv) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 9 wherein each Xaa is independently any amino acid (SEQ ID NO:9); to produce a modified plant;

growing said plant under said conditions; and

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selecting said modified plant having increased yield as compared to a corresponding wild type plant.

2. (Currently Amended) A method for increasing leaf surface area under conditions promoting plant growth relative to a corresponding wild type plant under said conditions, comprising increasing expression in a plant of a nucleic acid sequence encoding a 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger protein comprising the following motifs (i) – (iv):

(i) a motif as represented by sequence having at least 80 sequence identity to SEQ ID NO: 5 or SEQ ID NO:51, wherein the Leu at position 3 may be any hydrophobic amino acid (SEQ ID NO:51);

(ii) a motif as represented by sequence having at least 80 sequence identity to SEQ ID NO: 7 wherein Xaa at positions 1 and 5 is any hydrophobic residue and Xaa at position 6 is optionally present and, when present, is any amino acid (SEQ ID NO:7);

(iii) a motif as represented by sequence having at least 80 sequence identity to SEQ ID NO: 8 wherein the Ser at position 3 is optionally present (SEQ ID NO:8);

(iv) a motif as represented by sequence having at least 80 sequence identity to SEQ ID NO: 9 wherein each Xaa is independently any amino acid (SEQ ID NO:9); to produce a modified plant;

growing said plant under said conditions; and

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selecting said modified plant having increasedincreasing leaf surface area as compared to a corresponding wild type plant.

3. (Currently Amended) A method for prolonging vegetative growth phase of a plant under conditions promoting plant growth relative to a corresponding wild type plant under said conditions, comprising increasing expression in a plant of a nucleic acid sequence encoding a 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger protein comprising the following motifs (i) – (iv):

(i) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 5 or SEQ ID NO: 51, wherein the Leu at position 3 may be any hydrophobic amino acid (SEQ ID NO:51);

(ii) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 7 wherein Xaa at positions 1 and 5 is any hydrophobic residue and Xaa at position 6 is optionally present and, when present, is any amino acid (SEQ ID NO:7);

(iii) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 8 wherein the Ser at position 3 is optionally present (SEQ ID NO:8);

(iv) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 9 wherein each Xaa is independently any amino acid (SEQ ID NO:9); to produce a modified plant;

growing said plant under said conditions; and

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selecting said modified plant having prolonging vegetative growth phase as compared to a corresponding wild type plant .

4. (Previously Presented) A method according to claim 1, wherein said increasing expression is effected by recombinant means.

Claim 5. (Canceled)

Claim 6. (Canceled)

Claim 7. (Canceled)

Claim 8. (Canceled)

Claim 9. (Canceled)

10. (Previously Presented) A method according to claim 1, wherein said 2xC2H2 zinc finger protein is a dicotyledonous plant 2xC2H2 zinc finger protein.

Claim 11. (Canceled)

12. (Previously Presented) A method according to claim 1, wherein said plant is a monocot.

13. (Previously Presented) A method according to claim 1, wherein said increasing expression is effected by introducing into the plant a nucleic acid capable of increasing expression of a gene encoding said 2xC2H2 zinc finger protein.

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14. (Previously Presented) A method according to claim 13, wherein said nucleic acid capable of increasing expression is a nucleic acid encoding said 2xC2H2 protein.

15. (Previously Presented) A method according to claim 13, wherein said nucleic acid introduced into the plant is an alternative splice variant of the of the nucleic acid encoding a 2xC2H2 zinc finger protein.

16. (Previously Presented) A method according to claim 13, wherein said nucleic acid introduced into the plant is an allelic variant of the of the nucleic acid encoding a 2xC2H2 zinc finger protein.

17. (Previously Presented) A method according to claim 13, wherein said nucleic acid introduced into the plant is comprised on at least part of a chromosome.

Claim 18. (Canceled)

19. (Previously Presented) A method according to claim 1, wherein expression of said nucleic acid is driven by a plant promoter.

20. (Previously Presented) A method according to claim 19, wherein the plant promoter is a tissue preferred promoter.

21. (Previously Presented) A method according to claim 1, wherein said increased yield comprises increased above ground biomass.

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22. (Previously Presented) A method according to claim 1, wherein said increased yield comprises increased seed yield.

23. (Previously Presented) A method according to claim 1, wherein said increased yield comprises increased root yield.

Claim 24. (Canceled)

Claim 25. (Canceled)

Claim 26. (Canceled)

Claim 27. (Canceled)

Claim 28. (Canceled)

29. (Currently Amended) A method for the production of a transgenic plant having increased yield, increased leaf surface area and/or prolonged vegetative growth under conditions promoting plant growth relative to a corresponding wild type plant under said conditions, which method comprises

(i) introducing into a plant or plant cell a nucleic acid sequence encoding a 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger protein comprising the following motifs (i) – (iv):

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(a) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 5 or SEQ ID NO:51, wherein the Leu at position 3 may be any hydrophobic amino acid (SEQ ID NO:51);

(b) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 7 wherein Xaa at positions 1 and 5 is any hydrophobic residue and Xaa at position 6 is optionally present and, when present, is any amino acid (SEQ ID NO:7);

(c) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 8 wherein the Ser at position 3 is optionally present (SEQ ID NO:8); and

(d) a motif as represented by sequence having at least 80% sequence identity to SEQ ID NO: 9 wherein each Xaa is independently any amino acid (SEQ ID NO:9);

(ii) Cultivating the plant or plant cell under conditions promoting plant growth;
and

(iii) selecting for plants having increased yield, increased leaf surface area and/or prolonged vegetative growth.

Claims 30-34. (Canceled)

Claims 35-42. (Canceled)

Claim 43. (Canceled)

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44. (Previously Presented) The method of claim 10 wherein said dicotyledonous plant is from the family Brassicaceae

45. (Previously Presented) The method of claim 10 wherein said dicotyledonous plant is Arabidopsis thaliana.

46. (Currently Amended) The method of claim 10 wherein said 2xC2H2 zinc finger protein is SEQ ID NO:2 or a homologue, derivative or active fragment thereof.

47. (Currently Amended) The method of claim 10 wherein said 2xC2H2 zinc finger protein is a protein encoded by SED ID NO:1 or a portion of SEQ ID NO:1 or said protein is encoded by a nucleic acid sequence[[s]] capable of completely hybridizing with SEQ ID NO:1.

Claim 48. (Canceled)

49. (Previously Presented) The method according to claim 19, wherein the plant promoter is a constitutive promoter.

50. (Previously Presented) The method of claim 49, wherein the promoter is a GOS2 promoter.

51. (Previously Presented) The method according to claim 20, wherein the tissue preferred promoter is a seed-preferred promoter.

Claim 52. (Canceled)

53. (Currently Amended) [[A]]The method of claim 1 wherein said for increasing plant yield under conditions promoting plant growth relative to a corresponding wild-type plant under said conditions, comprising increasing expression in a plant of a nucleic acid sequence encoding a 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger protein comprises comprising a sequence having at least 80% sequence identity to a sequence selected from the group consisting of SEQ ID NOs: 2, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, and 33, 35, 37, 39, 46 and 50,

growing said plant under said conditions; and

Selecting said modified plant having increased yield as compared to a corresponding wild type plant.

54. (Currently Amended) [[A]]The method of claim 2 wherein said for increasing leaf surface area under conditions promoting plant growth relative to a corresponding wild-type plant under said conditions, comprising increasing expression in a plant of a nucleic acid sequence encoding a 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger protein comprises comprising a sequence having at least 80% sequence identity to a sequence selected from the group consisting of SEQ ID NOs: 2, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, and 33, 35, 37, 39, 46 and 50,

growing said plant under said conditions; and

Selecting said modified plant having increasing leaf surface area as compared to a corresponding wild type plant.

55. (Currently Amended) [[A]]The method of claim 3 wherein for prolonging vegetative growth phase of a plant under conditions promoting plant growth relative to a corresponding wild type plant under said conditions, comprising increasing expression in a plant of a nucleic acid sequence encoding a 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger protein comprises comprising a sequence having at least 80% sequence identity to a sequence selected from the group consisting of SEQ ID NOs: 2, 13, 15, 17, 19, 21, 23, 25, 27, 29 and 31, 33, 35, 37, 39, 46 and 50,

growing said plant under said conditions; and

Selecting said modified plant having prolonging vegetative growth phase as compared to a corresponding wild type plant.

56. (Currently Amended) [[A]]The of claim 29, wherein method for the production of a transgenic plant having increased yield, increased leaf surface area and/or prolonged vegetative growth under conditions promoting plant growth relative to a corresponding wild type plant under said conditions, which method comprises

(i) introducing into a plant or plant cell a nucleic acid sequence encoding a 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger protein comprises comprising a sequence having at least 80% sequence identity to a sequence selected from the group consisting of SEQ ID NOs: 2, 13, 15, 17, 19, 21, 23, 25, 27, 29 and 31, 33, 35, 37, 39, 46 and 50,

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(ii) Cultivating the plant or plant cell under conditions promoting plant growth;

and

(iii) Selecting for plants having increased yield.